

REMARKS/ARGUMENTS

Claims 2-5, 7, 12-15, and 17-31 are currently pending. Claims 7 and 20-31 have been withdrawn. Claims 2, 12, and 17 have been amended. Applicants previously indicated that claims 17-19 were withdrawn but have reinstated claims 17-19 as the examiner has indicated that these claims are generic to the elected species. No new matter has been added. Support for amendments to the claims may be found in the specification as originally filed at page 20, line 12 to page 22 line 3.

Claims 2-5, 12-15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nyui et al. (U.S. Patent No. 6,004,187) in view of Wiswesser et al. (U.S. Patent No. 6,159,073).

Applicants respectfully submit that claim 2 as amended is not rendered obvious by Nyui in view of Wiswesser. Specifically, claim 2 has been amended to recite "said area which is selected from said surface by using information from at least one of the spectral waveform, reflectivity of the surface of the sample, and a frequency spectrum in the spectral waveform, on the basis of a characteristic quantity of the spectral waveform of the reflected light from said sample by the irradiation of said white light." Applicants note that the spectral waveform, the reflectivity, and the spectrum of reflected light from the surface of a sample vary depending on the material in the particular area of a sample that is irradiated by light. For example, if incident light strikes a wiring pattern, a peripheral area, or a circuit pattern each of the spectral waveform, the reflectivity, and the spectrum of reflected light will vary dependent on the area irradiated. See for example FIG. 5, 6, and 7 of the instant application and the description of these figures at pages 20 and 21. As the spectral waveform, the reflectivity, and the spectrum of reflected light vary depending on the material that the incident light strikes, so to do the measurements of the thickness of a thin film. Therefore, to provide a relatively accurate measurement of the thickness of a thin film as the thin film is polished, the area from which reflected radiation is collected should have known characteristics. Therefore, according to amended claim 2, the area from which reflected light is collected is selected based on the spectral waveform, the reflectivity, and the spectrum of the reflected light.

Nyui discusses a method for polishing a sample and collecting reflected radiation from the sample to measure the thickness of a polished layer of the sample. The sample area irradiated is predetermined according to Nyui. See the Nyui abstract in addition to other portions of the Nyui patent. While Nyui discusses sample polishing and measuring the thickness of a polished layer, Nyui fails to discuss a method for selecting the predetermined area from which reflected radiation is collected. Therefore, Nyui fails to show or suggest selecting an area of a sample based on the spectral waveform, the reflectivity, and/or the spectrum of the reflected light reflected from the sample. Therefore, Nyui fails to show or suggest every limitation of amended claim 2.

Wiswesser fails to make up for the foregoing described deficiencies of Nyui. Wiswesser describes a polishing method for polishing a substrate that has a thin film layer formed thereon. The Wiswesser polisher includes a window formed in a polishing platform and the window is used to pass radiation to the sample being polished. See Wiswesser at Col. 6, lines 29-42. A number of areas of a substrate are irradiated by light and reflected light is collected to calculate the thickness of a polished layer of the substrate. See Wiswesser at Col. 9, lines 41-55. While Wiswesser describes radiating a number of portions of a substrate to determine layer thickness, Wiswesser fails to describe a method in which an area of a substrate is selected based on the spectral waveform, the reflectivity, and the spectrum of the reflected light reflected from a sample. Because Wiswesser fails to describe the foregoing limitations of amended claim 2, Wiswesser fails to make up for the deficiencies of Nyui. Therefore, Nyui and Wiswesser fail to render amended claim 2 obvious.

Claims 12 and 17 have been amended to include similar limitations as those of amended claim 2 distinguished from Nyui and Wiswesser above. Therefore, for at least the same reason that Nyui and Wiswesser fail to render claim 2 obvious, Nyui and Wiswesser similarly fail to render amended claims 12 and 17 obvious.

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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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